

We claim:

1. An optical printer forming images by exposing a photosensitive object, comprising:
 - a light source irradiating a light;
 - an optical shutter producing exposure light for exposing said photosensitive object by controlling a transmission of the light from said light source; and
 - a photo detector outputting a signal by detecting the exposure light which exposes said photosensitive object.
2. An optical printer according to claim 1, wherein said photo detector detects the exposure light at a position lower than a position of said photosensitive object.
3. An optical printer according to claim 1, wherein said optical shutter and said photosensitive object relatively move so that a projection position of the exposure light onto said photosensitive object moves to produce images on said photosensitive object.
4. An optical printer according to claim 3, wherein an end of said photosensitive object is detected based on said signal from said photo detector.
5. An optical printer according to claim 3, wherein the exposure of the exposure light onto said photosensitive object is carried out during said optical shutter and said photosensitive object move relatively.
6. An optical printer according to claim 1, further comprising: a light amount control mechanism for controlling the amount of emission light of said light source based on said signal from said photo detector.
7. An optical printer according to claim 6, wherein said light source radiates at least three color lights, and said photo detector detects each of said three color lights.
8. An optical printer according to claim 7, wherein said light source is of LEDs.

9. An optical printer according to claim 3, wherein a front end of said photosensitive object is detected by said photo detector, and the exposure is started based on the detected result thereof.

5 10. An optical printer according to claim 9, further comprising: a conveying mechanism moving said photosensitive object relatively to said optical shutter.

10 11. An optical printer forming images by exposing a photosensitive object, comprising:

a light source irradiating a light;

an optical shutter relatively moving with respect to said photosensitive object and controlling a light amount projected onto said photosensitive object from said light source; and

15 a photo detector outputting a signal by detecting the light passed through said optical shutter.

20 12. An optical printer according to claim 11, wherein said optical shutter is a liquid crystal optical shutter, and said photosensitive object is exposed when said liquid crystal optical shutter and said photosensitive object move relatively.

25 13. An optical printer according to claim 11, further comprising: a conveying mechanism moving said photosensitive object relatively to said optical shutter and said photo detector.

30 14. An optical printer according to claim 11, wherein said photo detector detects an end of said photosensitive object by detecting a change of light amount caused by the light which has passed through said optical shutter being intercepted by said photosensitive object and outputs a signal when said photo detector detects the end of said photosensitive object.

35 15. An optical printer according to claim 11, wherein a starting position of the exposure onto said photosensitive object is determined based on said signal.

16. An optical printer according to claim 11,

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wherein a conveying speed of said photosensitive object is changed while said photosensitive object is conveyed.

17. An optical printer according to claim 16,
wherein said photosensitive object is an instant film in
5 which self-developer is stored.

18. An optical printer forming images by exposing a
photosensitive object having a photosensitive portion and
a non-photosensitive portion, comprising:
10 a light source irradiating a light; and
an optical shutter moving relative to said
photosensitive object and controlling a light amount
projected onto said photosensitive object from said light
source,

15 wherein the relative speed of said
photosensitive object when said photosensitive portion is
exposed is slower than the relative speed of said
photosensitive object when said non-photosensitive
portion is exposed.

19. An optical printer according to claim 18,
20 wherein said photosensitive object is an instant film in
which self-developer is stored, and said optical printer
comprises a development roller for squeezing said self-
developer.

20. An optical printer according to claim 19,
25 wherein the conveying speed of said instant film when
said developer is squeezed by said development roller is
slower than the conveying speed of said instant film when
said developer is not squeezed.

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